

## THE ROLES AND EXPECTATIONS OF NURSES FROM NURSING RESEARCH IN CZECH REPUBLIC

Sylva Bártlová, Valérie Tóthová

*University of South Bohemia, Faculty of Health and Social Studies, České Budějovice, Czech Republic*

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### Abstract

In connection with the increasing demands for quality nursing care and the growing requirements concerning the education of nurses, the necessity for nurses to participate in nursing research appears ever more urgent. To date, the nursing practice has been based rather on established standard methods and the results of foreign research studies have not been utilised sufficiently. Therefore we wanted to determine to what extent the nurses in practice participate in research activities and which forms of research they are engaged in. The aim of the study was to describe in which way the nurses in the Czech Republic take part in the scientific-research activities, what type of research they are usually engaged in, whether they have feedback information about these research studies and their results, and whether they utilise the research results in their work.

**Key words:** *nursing research – nurse – feedback information*

### INTRODUCTION

Nursing, as one of the disciplines where research activities are undertaken, has undergone big advancement during recent years. In the context of increased demands concerning the quality of nursing activities and growing requirements concerning the level of education of nurses, the need for nurses to take part in nursing research is increasingly apparent. This concerns not only passive participation, when the nurses become the subject of research, but especially active participation when the nurses themselves implement the nursing research.

At present Czech nursing has a research base concentrated especially at universities and other educational institutions where the nurses are taught the principles of the scientific and research work and carry out research in nursing (Bártlová et al. 2008). However, it is not possible to expect that every nurse will undertake research at her own workplace. A lot of barriers in the clinical environment are still to be

envisaged before research becomes a legitimate and routine activity of nurses in the Czech Republic. For the time being, the nursing practice has been rather based on established standard procedures and not even the results of foreign research have been used in nursing sufficiently. The establishment of research-based nursing and integration of the research findings into routine nursing practice will require a lot of systematic measures, as well as the support from institutions, hospital management and other health care professionals (Farkašová et al. 2002, Žiaková et al. 2003, Boledovičová and Matulay 2007). We have to explore in which way nurses in health care settings participate in research and use research findings in their practice. The research carried out abroad has shown (Tsai 2003) that what the nurses who are involved in research need most is the support of the “trainers”, experienced professionals, advisors, sociologists, etc. In the past, there was a great difference between the nurses conducting research and other health

care professionals who did not undertake any research, even in industrially developed countries. But as Latimer (2003) states: the nurses can use research in their practice in the same way they use a stethoscope – as a tool for gaining information necessary in the process of decision making. Nevertheless, it is necessary for the nurses in any role to be taught how they can incorporate research into their everyday practice. Both the contents and the scope of the nursing practice should be verified and supported by research so that its efficiency could be evaluated. Transfer of the research into clinical practice is a key strategy for unification of the educational, scientific and humane viewpoints of nursing in the future. We were therefore interested in the extent to which the nurses in practice participate in research and in the forms of the research. The questions concerning the nursing research in the Czech Republic were part of a larger research task “The changes in the position of nurses at the beginning of the new millennium” which was supported by the Internal Grant Agency of the Ministry of Health of the Czech Republic (Bártlová 2006).

## MATERIAL AND METHODS

Altogether 1,040 nurses from all over the Czech Republic were included in the random sample selected using quotas. This selection method ensured that the sample structure concerning the regions and types of nurses' workplaces corresponded with the structure of the basic population of nurses in the Czech Republic.

During selection of the sample, the numbers of nurses in the individual regions of the Czech Republic were taken as the basic indicator of representativeness. The regions were defined on the basis of the administrative division valid as of 1 January 2001. Within the research nurses from all regions of the Czech Republic were approached and their representation corresponded with the structure of the basic population of nurses. It can be stated that the deviation from the basic population did not exceed 0.5%. The research findings are representative for nurses in the Czech Republic from the point of view of the individual regions.

**Table 1 Structure of the selected sample of nurses by the regions of the Czech Republic**

Region	(n)	%	Deviation
Praha	183	17.6	0.5
Středočeský	88	8.5	-0.1
Jihočeský	61	5.9	0.3
Plzeňský	58	5.6	0.0
Karlovarský	31	3.0	0.0
Ústecký	74	7.1	-0.3
Liberecký	34	3.3	-0.3
Královéhradecký	58	5.6	0.2
Pardubický	45	4.3	0.2
Vysočina	48	4.6	0.0
Jihomoravský	122	11.7	0.0
Olomoucký	62	6.0	-0.2
Zlínský	50	4.8	-0.3
Moravskoslezský	126	12.1	0.2

The other feature whose representativeness was observed was the type of workplace where the nurses pursued their profession. From the point of view of the type of workplace the sample of nurses consisted of nurses working

in hospitals (both teaching and other), in facilities providing out-patient care and in other facilities (spas, sanatoria, home care). The structure of the sample of nurses is presented in Table 2.

**Table 2 Structure of the selected sample of nurses by their workplace**

	(n)	%	Deviation
Hospital	625	60.1	-0.4
Out-patient facility <sup>1)</sup>	265	25.5	-0.6
Other facility	150	14.4	1.0

<sup>1)</sup> including hospital out-patient departments

Also regarding this feature the structure of the sample corresponded with that of the basic population of nurses (maximum deviation was 1.0%) and so the research findings are representative for the nurses in the Czech Republic from the point of view of the facility where they pursue their profession.

The other sociodemographic features which were investigated within the research were not taken as representative.

On the basis of the project the research was drawn up as a sociological research utilising research instruments. The survey was made using the technique of a fully standardised structured interview of an inquirer with a respondent. Altogether 384 inquirers from all over the Czech Republic were involved in the research. They were given detailed instructions prior to the beginning of the research. The data collection was secured by professional inquirers from the INRES-SONES agency. During the field investigation the inquirers approached 1,246 randomly selected nurses with a request for an interview. Altogether 191 nurses (i.e., 15.5% of all nurses addressed) refused the interview. On the contrary, 1,045 nurses (i.e., 84.5% of all nurses addressed) agreed with the interview.

Each completed inquiry sheet was subjected to a thorough logical and optical review. Logical relations and the completeness and credibility of completed data were checked.

All inquiry sheets with non-functional logical relations, as well as those incompletely filled in (usually when the respondent refused to answer the questions and decided to stop the inquiry – in this case part of the inquiry sheet was not filled in) were rejected. The inquiry sheets from 5 respondents were rejected on the basis of an optical and logical review. Thus the inquiry sheets from 1,040 respondents were included in the sample.

Concerning selected features the research method used involved several levels of filtration during the interview. Of course there was the problem of two types of missing data – first, there were the so called structural omissions, i.e., the cases where the information was missing because the question had not been asked on the basis of the condition of the filter; second, there were the so called true omissions, when the question should have been asked but was not or was asked and was not answered. The missing data were not numerous, nevertheless, they always occur in inquiry surveys. Because it is necessary to define the missing or invalid data as one value for the purpose of mathematical-statistical analyses we combined both types of omissions together. The analyses themselves were made using the valid values of each feature. There were continuous answers between the items used. It was necessary to make a number of transformations on the

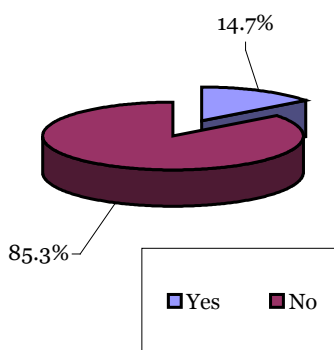
data set in order that the main findings could be summarised. In consequence of the above mentioned transformation the character of the features in transformed variables changed from the continuous to the interval or categorical one.

Statistical processing of the data was made using the SPSS programme. The first stage of classification was processed, as well as the contingency tables of the second stage of classification. The rate of dependency of the selected features was determined on the basis of the chi-square and other test criteria (according to the type of the feature). For the determination of the dependency rate of selected features the chi-square test of independence was used for a multi-field contingency table, when for each field the

differences between theoretical and empirical rates were tested. In case of need, the Yates correction method was used. The level of significance  $\alpha$  was determined at the level of 0.05 which seems to be sufficient for this type of research.

## RESULTS

The level of engagement of nurses in nursing research has not been very high yet. When we asked the question “Have you ever participated in nursing research?” only less than 15% of the approached nurses answered that they have at some time participated in nursing research. The other respondents did not engage in this form of scientific research activity.

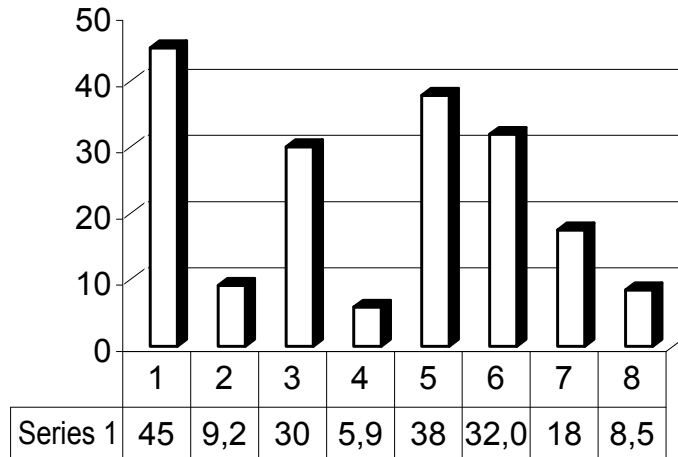


**Graph 1 Participation of nurses in nursing research (N = 1040)**

The analysis of the second stage of classification did not show any statistically relevant relations between the demographic characteristics (age, marital status, etc.) and the engagement of nurses in nursing research. More often the experienced nurses who had worked at 4 or more workplaces took part in the research. More frequent was also the participation of nurses working in university hospitals and in the offices of specialist physicians. However, the fact whether the nurse worked in the private or public sector did not have any influence upon her participation in nursing research. In the case of this factor the influence of the level of education was very

strong – the higher the education of nurses, the higher their participation in nursing research. The applied test criteria draws the attention to the fact that significantly lower participation in nursing research was found in nurses with secondary education (secondary nursing school) while, on the other hand, higher participation was found in nurses who had completed bachelor or master studies or various postgraduate or specialisation forms of study or long-time courses.

Those nurses who claimed that they had participated in nursing research (N = 153) were then given the question concerning the type of research.



**Graph 2 Participation of nurses in nursing research – by the type of research (in %) (N = 153)**

Key: 1 – within study at school; 2 – collecting of various data; 3 – development of nursing standards; 4 – working on various registers; 5 – patient satisfaction monitoring – development of a questionnaire; 6 – patient satisfaction monitoring – data collection and analysis; 7 – patient satisfaction monitoring – analysis of questionnaires; 8 – another type of research.

Note: The sum of the relative rates is higher than 100% because the respondents could choose more than one answer.

The nurses engaged most often in research within the framework of their study – this was confirmed by 45% of nurses who stated that they had participated in research. Relatively frequent was also the active participation of nurses in patient satisfaction monitoring – they took part especially in the development of a questionnaire (38%) and in data collection and analysis (32%). Concerning other relatively frequent forms of participation we can mention working on the development of nursing standards (30%). The other forms of involvement of nurses in nursing research were mentioned less frequently.

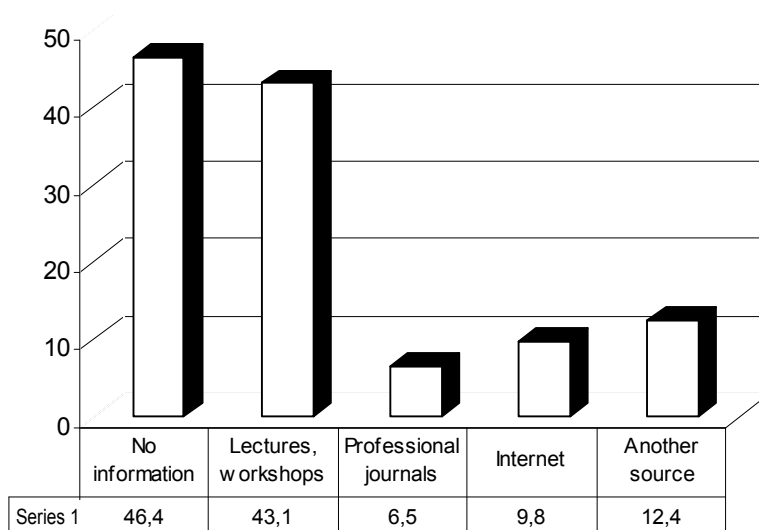
An important incentive for participation in nursing research is the feedback, that is getting backup information about the research studies (especially about their findings) in which the nurses took part. The

nurses were asked about this fact too; namely they were given the question: “Have you got any feedback information about the research studies you took part in? (For example, the information of what their findings were, what was achieved, etc.)”.

Note: The sum of the relative rates is higher than 100% because the respondents could choose more than one answer.

Almost one half of the nurses who participated in nursing research do not have any feedback information about the research studies. Usually the nurses are informed about the past research at various lectures and workshops. Other information resources are represented less frequently. Among the professional journals, *Sestra* clearly represents the leading source of feedback information. The other resources specified by the nurses: personal contact with people who carried out the research, the fact that they themselves analysed the research, information from the hospital management, the director of nursing or the head nurse. Other resources were given only sporadically.

The last factor which was investigated among nurses in connection with nursing research was the fact whether the nurses used the research findings in their work. The question was as follows: “Do you use the research findings in your practice?”



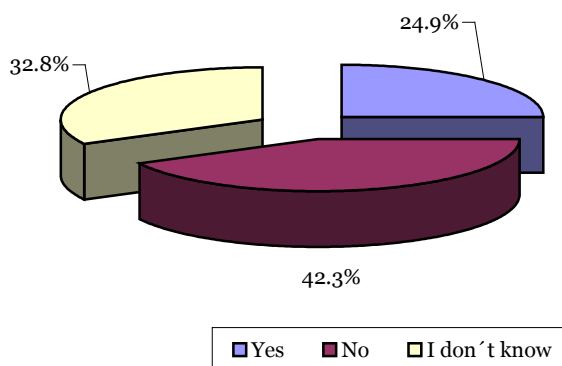
**Graph 3 Feedback information about the research studies (in %) (N = 153)**

Note: The sum of the relative rates is higher than 100% because the respondents could choose more than one answer.

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**Graph 4 Use of research findings in practice (N = 1040)**

Only one quarter of nurses consciously use the research findings in their work. One third of nurses do not know whether they use the research findings or do not and the last group (42.3%) state that they do not use the research findings in their work.

The analyses of the second level of classification gives evidence that older and more experienced nurses (with practice of 31+ years) and the graduates from bachelor, postgraduate or specialisation study or long time courses use the research findings in their work more frequently. These variables have a statistically relevant influence upon the utilisation of the research findings in the work of nurses. This influence was not confirmed in the other indicators.

## DISCUSSION

The level of involvement of nurses in nursing research has not been very high yet. The research findings imply that participation of nurses in scientific and research activities is relatively small. Only just below 15% of the approached nurses stated that they had sometimes taken part in nursing research. The other nurses have not taken part in this form of scientific research activity as yet. Among others, it can be explained by the fact that the research base of Czech nursing has been concentrated especially at the universities and other educational institutions, where the nurses receive the basic training in fundamentals of the scientific and research work and carry out some minor investigations in nursing. Undoubtedly we have to make do with the consequences of the low level of training of nurses in this field in the past, when the nursing research was given minimum attention and participation of nurses in this form of activity was not planned. The implications of this approach extend until the present time. It can be said that the higher the education of nurses, the higher their participation in nursing research. Significantly lower participation in nursing research was found in nurses with secondary education (secondary nursing school) while on the other hand, higher participation was found in nurses who had completed bachelor or master studies or various postgraduate or

specialisation forms of study or long-time courses.

Our research took place in hospitals (both teaching and others), in out-patient facilities, as well as in other health care facilities (spas, sanatoriums, home care). The nurses working in these health care facilities mentioned most frequently the following forms of research:

- participation in nursing research during their study at school (45% of respondents);
- participation in patient satisfaction monitoring – they took part especially in the development of a questionnaire (38% of respondents) and in data collection and analysis (32% of respondents);
- development of nursing standards (30% of respondents).

The information that almost one half of the nurses who participated in nursing research do not have any feedback information about the research studies and their findings is very interesting. One quarter of nurses consciously use the research findings in their work. The older and more experienced nurses (with practice of 31+ years) and the graduates from bachelor, postgraduate or specialisation study or long time courses use the research findings in their work more frequently.

## CONCLUSION

The findings of the research imply a relatively small participation of nurses in scientific and research activities. Only less than 15% of the approached nurses stated that they sometimes took part in nursing research. The other nurses have not engaged in this form of scientific-research activity. Our research was carried out in hospitals (both teaching and others), in out-patient facilities, as well as in other health care facilities (spas, sanatoriums, home care) and the nurses working in these facilities mentioned as the most frequent form of research their participation in patient satisfaction monitoring – especially in the development of a questionnaire and data collection and analysis. Concerning other frequent forms of research we can mention the development of nursing standards. Almost one half of the nurses who participated in nursing research do not have any feedback information about the research

studies and their findings. One quarter of nurses consciously use the research findings in their work. The future investigations should concentrate on searching the ways of motivation of nurses towards higher involvement in research activities.

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### **Contact:**

Sylva Bártlová, University of South Bohemia, Faculty of Health and Social Studies,  
U Výstaviště 26, České Budějovice, Czech Republic  
E-mail: bartlova@zsf.jcu.cz